



Gypsy Moth Facts

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What is a gypsy moth and why is it a threat to Washington?

The gypsy moth is one of America's worst forest pest insects. It feeds on the foliage of more than 500 different species of trees and shrubs and causes enormous damage to the environment and to the economy.

Economic losses caused by the gypsy moth have averaged \$30 million a year for the last 20 years, according to U.S. Department of Agriculture estimates. Most of the loss is due to quarantines imposed on timber and agricultural products.

Due to its voracious appetite and ability to rapidly reproduce, the gypsy moth causes incredible damage to forests, nurseries, vegetation along creeks and rivers, and trees and shrub in yards and parks. It alters wildlife habitat and affects the quality of life in communities that experience repeated outbreaks. Major infestations are cyclical. When disease and other factors bring an outbreak

to an end, the gypsy moth population remains small for four to six years and then begins to build again. A 10-state area in the Northeast, for example, experienced a tremendous increase in gypsy moth damage between 1997 and 2001. The number of defoliated acres in these states rose from 540,000 acres to 1.6 million acres during the period. The gypsy moth has no native enemies in this country. If allowed to become established in Washington, this insect could cause devastating impacts to agricultural, timber and residential areas.

Are all gypsy moths the same?

No. The European variety was brought to the U.S. from Europe over 100 years ago. It got loose by accident and quickly established residency in Massachusetts. It has proved extremely resistant to eradication efforts. Although it has been the subject of more eradication and control strategies than any forest insect in U.S. history, it has spread to 19 states and the District of Columbia.

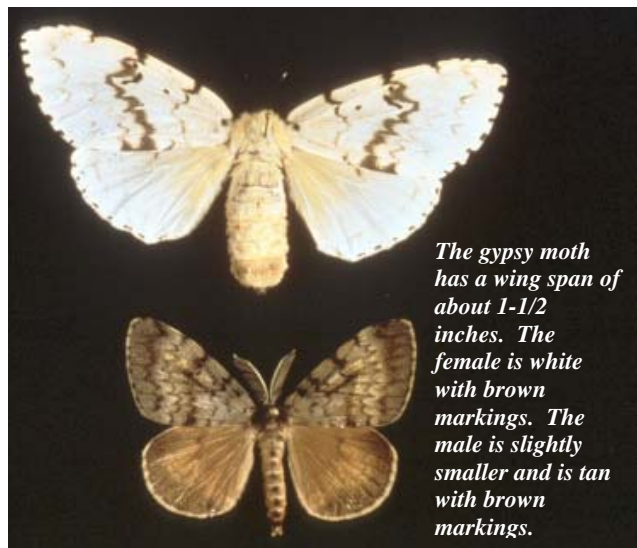


The Asian variety was first found in this country in 1991 on a ship visiting the Port of Tacoma. It is a much greater threat to Washington state than the European variety because it eats evergreen as well as deciduous trees, and its female can fly. This means that Asian infestations can spread much more quickly and further, and they are much more difficult to pinpoint. To date, the Asian gypsy moth has not become established in this country.

What kind of damage does the gypsy moth do?

It devours the leaves of more than 500 species of trees and shrubs. Its favorites include oak, birch, apple, poplar, alder, cottonwood, hawthorn and willow. The Asian variety also favors evergreens.

Trees repeatedly defoliated either die or become so weak that they are susceptible to disease and other pests. This results in a loss of wildlife habitat; and significant degradation of water quality in streams as a result of increased temperature, siltation, and large mounts of caterpillar droppings being deposited in the water.



The gypsy moth has a wing span of about 1-1/2 inches. The female is white with brown markings. The male is slightly smaller and is tan with brown markings.



When the leaves are all eaten, gypsy moth caterpillars will search anywhere for food – even the eaves of a house.

Washington's successful gypsy moth program

The Washington State Department of Agriculture (WSDA) conducts an annual survey to locate new introductions of gypsy moth and determine if a reproducing population of the pest exists. Every summer, approximately 20,000 cardboard gypsy moth traps are placed throughout the state. Most traps are placed in Western Washington where commerce and people moving or traveling to our state from the East Coast increase the risk of introduction.

Male moths are attracted to the traps by a female scent lure. Traps are checked every two weeks to three weeks during the summer. If moths are caught, more traps are placed in the area to pinpoint the center of the infestation. Introductions have occurred every year in Washington since 1977. The Department of Agriculture has eradicated all infestations due to:

- An aggressive summer trapping program to find new introductions of gypsy moth;
- Treatment programs to eliminate infestations in the spring before they spread; and
- Cooperation among local municipalities, the public, U.S. Department of Agriculture, and other agencies regarding summer trapping and spring eradication programs.

What is the difference between eradication and suppression?

Eradication entirely eliminates an infestation. Suppression reduces a population.

Why has Washington typically selected eradication as a strategy?

Eradication better protects the environment and costs less. This strategy has kept Washington free of gypsy moth since 1974, the first year it was detected. States in the East and upper Midwest where the moth is permanently established must deal with the cost of damage to trees and shrubs, the cost of conducting suppression and slow-the-spread programs, and the cost associated with quarantines and other regulatory actions. Western states still have the option of conducting eradication programs.

What control measures or tools might be used against the gypsy moth?

Control measures are needed when a reproducing population of the gypsy moth is found. Potential tools include:

- Gypchek: A virus that affects only gypsy moth caterpillars.
- *Bacillus thuringiensis* var. *kurstaki* (Btk): A bacterium that affects only caterpillars, including gypsy moth. The caterpillar must eat Btk for it to have an effect.
- Diflubenzuron: A chemical that disrupts the growth of caterpillars.
- Mass trapping, mating disruption, and the release of sterile male moths.

The U.S. Environmental Protection Agency registers all three pesticides for use in this country. Diflubenzuron and Btk have been used successfully for gypsy moth here.

How will a control measure be selected?

If a decision is made to treat an area, a method or a combination of methods will be selected based on potential effects to human health, environmental considerations, and the effectiveness of the product.

The U.S. Department of Agriculture prepared a final environmental impact statement on national gypsy moth management in 1995. It presents a range of alternatives for controlling the pest, and discusses potential impacts of using control measures.

The state Department of Agriculture prepares documents required under state and national environmental policy acts. These documents are made available for public review and comment. Comments concerning the documents are reviewed before a decision is made whether to proceed with treatment.

Where can I get more information on the gypsy moth in Washington?

Community outreach programs are conducted in areas where eradication treatments are anticipated. For information, call (800) 443-6684, e-mail to gypsymoth@agr.wa.gov, or visit the WSDA Web site at www.agr.wa.gov and click on "Gypsy Moth." For information on the health effects of various control methods, see the Washington State Department of Health Web site at <http://www.doh.wa.gov/ehp/ts/Pest/egm/health-info-egm-control.htm>.



Since the '70s, Washington state has successfully detected and eradicated gypsy moth infestations and kept the pest from becoming established.

WSDA cooperates with neighboring states and Canadian provinces to make sure the Pacific NW doesn't end up permanently infested as has happened in the East.

Statewide Trapping Results

2005 — 31 total

25 King County

- 1 Each in six counties: Clark, Cowlitz, Island, Kitsap, Pierce & San Juan counties

2004 — 68 total

23 Kitsap County

21 King County

10 San Juan

5 Pierce County

3 Snohomish County

2 Island County

1 Clark, Lewis, Mason & Whatcom counties

2003 — 59 total

31 King County

14 Jefferson County

8 Lewis County

2 Kitsap County

3 Pierce County

1 Skagit County